

Ultrafast spectroscopic study of exciton dynamics in nanocrystals

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The effects of quantum confinement on carrier relaxation in semi-conductor nanocrystals have attracted fundamental as well as practical interest. In particular, reports of enhanced efficiencies of impact ionization or multi-exciton generation, have driven this effort to a large degree. In my talk I will describe experiments which demonstrate not only that these efficiencies have in some cases been grossly over-estimated, but also that the spectral features used to determine them are not yet fully understood.